📋 Summary of Findings

1. Dataset Overview

- The Titanic dataset contains **891 passengers** with a mixture of categorical (Sex, Pclass, Embarked) and numerical (Age, Fare, SibSp, Parch) features.
- Missing values were found mainly in Age, Cabin, and Embarked columns.

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2. Univariate Analysis

- **Sex**: Approximately **65% of passengers were male**.
- **Pclass**: Most passengers traveled in **3rd class**.
- **Age**: Majority were **young adults** aged between 20–30 years.
- **Fare**: Fare distribution was **highly skewed**, with most fares in the lower range.

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3. Bivariate Analysis

- **Sex and Survival**: **Females had a much higher survival rate** compared to males.
- **Pclass and Survival**: **1st class passengers** had the highest survival rates.
- **Embarked and Survival**: Passengers embarked from **Cherbourg (C)** had slightly better survival rates.
- **Age and Survival**: **Younger passengers** had better survival chances.
- **Fare and Survival**: Passengers who **paid higher fares** were more likely to survive.

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4. Correlation Analysis

- **Fare** is **positively correlated** with **Survival**.
- **Pclass** is **negatively correlated** with **Survival**.
- Strong negative correlation between **Fare and Pclass** (higher class passengers paid more).

📌 Key Insights

- **Gender**, **Class**, and **Fare** are major factors influencing survival.
- **Younger, wealthier, and higher-class passengers** had better chances of surviving.
- **Embarkation point** (Cherbourg) also showed some impact on survival.